

**X-ray, EUV and UV counterparts
of polar radio brightenings**

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Radio brightenings near the solar poles have recently been detected at 87 GHz (3.5 mm). Some coronal holes are seen as radio bright, but no uniform brightness exist over the holes in 3.5 mm. Comparison to Yohkoh/SXT, SOHO/EIT and TRACE data have revealed counterparts like bright points, polar plumes, and diffuse EUV brightenings to the local radio bright regions.

Calculations using previously published temperature and density values for these types of sources show that at least polar plume bases should be visible in mm-radio. For bright points, detection in radio seems to depend on the density and loop geometry (line of sight source length) of individual sources.

Some of the radio bright regions were seen inside less bright EUV areas ('mini-coronal holes' in the coronal iron line images). The borders of these regions are now observed to be also rich in polar faculae.

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